
ASSESSMENT OF THE HYGIENIC PRACTICES OF FOOD VENDORS AND GOVERNMENT INTERVENTION IN SELECTED SECONDARY SCHOOLS FROM ABEOKUTA SOUTH LOCAL GOVERNMENT AREA OF OGUN STATE, NIGERIA

¹Adewunmi A.R, ²Ajayi J.O and ³Omotoso B.O.A

¹Science Laboratory Technology Department, Moshood Abiola Polytechnic Ojere, Abeokuta, Ogun State, Nigeria.

²Food Technology Department, Moshood Abiola Polytechnic Ojere, Abeokuta, Ogun State, Nigeria.

E-mail: adebisadewunmy@yahoo.com

Abstract: The chances of food contamination largely depend on the health status of food handlers or vendors and their hygiene behaviors and practices. Information regarding food vendors' practices is key to addressing the trend of increasing food-borne diseases. In this study, the hygienic practices of food vendors and government intervention in selected secondary schools in Abeokuta South Local Government shall be examined. Structured questionnaires and observational checklists were administered to thirty - nine (39) respondents which were picked randomly from the 20 secondary schools in the study area. All the respondents were female. The average age of the vendors was 38 - 42 years. The percentage of the respondents that washed their hands regularly is below average (< 50%). A significant number of the vendors were either not wearing appropriate uniform or their uniform was dirty. About half of the respondents do not have handkerchiefs for drying hands after washing, during coughing or sneezing. Almost all the vendors claimed to have undergone food handling training organized by the appropriate governmental agency, however many of the respondents submitted that the training was self sponsored. It was observed that the activities of this vendors were not been monitored by the appropriate governmental bodies, and this is evident in the hygienic practices of the food vendors, which was discovered to be below standard.

Keywords: Food Vendors, Hygiene, Food Contamination, Food Safety.

INTRODUCTION

The term food hygiene encompasses a whole range of issues that must be addressed for ensuring the safety of prepared food. Food hygiene probably put too much emphasis on cleanliness but food safety required much more than a clean premises. The risk of food getting contaminated depends largely on the health status of the food vendors, their personal hygiene and food practices (Mead, 1999). Food poisoning and other food borne diseases could occur in places such as schools, hostel, hospitals where food and drinks are served or sold to groups by food vendors.

The high incidence of food borne illness has led to an increase in global concern about food safety (Van Tonder, 2007). Several food-borne disease outbreaks have been reported to be associated with poor personal hygiene of people handling food stuffs. Food borne diseases are increasing in both developed and developing countries. Diarrhea diseases, mostly caused by food borne microbial pathogens, are leading causes of illness and death in developing countries; killing an estimated 1.9 million people annually at the global level.

Food contamination may occur at any point during its journey through production, processing, distributing, and preparation (Green 2005; Hennessy, 2004). Infection can also be acquired through contaminated unwashed fingers, insects, circulation of bank notes and wind during dry weathers (Isara, 2009). Contamination of food with eggs and cysts especially those sold by hawkers may also serves as a source of infections to consumer of such items (Umeche, 1991).

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Therefore, food vendors or handlers, that is, any person who handles food regardless whether he actually prepares or serve it, play an important role in the transmission and, ultimately, prevention of food-borne illness (Isara, 2009). Information regarding food vendors' practices is key to addressing the trend of increasing food-borne diseases.

In recent years, due to changing lifestyle, breakdown of joint family system and increase in number of working women has led to consumption of ready to eat foods or street foods (Santosh, 2008). These has resulted in more school children depending on school food vendors for mid day food. The implication is that the children are exposed to hazards of purchasing food from vendors who may harbour dangerous pathogen or have the potentials of spreading infection to a large number of students.

Street food are ready to eat foods and beverages prepared and sold by vendors, especially on streets and other public places including schools for immediate consumption or consumption at a latter period without further processing or preparation (Muleta and Ashenafi, 2001). Street food are an important source of affordable food, but often do not meet proper hygiene standards, in large part because of weak regulatory systems, lack of food financial resources to invest in safer equipment, and lack of education for food handlers. The food may satisfy immediate needs, but pays little attention to hygiene and food safety (Santosh *et al.*, 2008). The school meal services started when it was realised that the hours spent by children in school affects their growth and development, due to the fact that adequate nutrition is not provided for these children during the long hours at the school.

Good health depends largely on the taking of balanced diet. If children are to grow into health citizens and for them to study well throughout the days, adequate food is required. A hungry child will be irritable, drowsy and inattentive in the class. Therefore feeding the school children during school hours forms an aspect of the health services. The practice started a long time ago when the Ministry of Health felt that inadequate feeding during the hours spent by children in school affects their growth and development leading to borderline malnutrition.

As a result, the ministry started the central kitchen, where paid government staff prepared school meal. Initially, there were two central kitchens, Onikan for Lagos Island and Yaba for Lagos Mainland; the pupils paid little amount because the government subsidized the cost of the meals. This was an expensive programme for the government and it was therefore decided that private individuals should be employed as school food vendors to provide the meals at very minimal profits.

The aim of this study is to assess the relationship between food vendors' hygiene behaviour and practices, survey the impacts of governmental bodies established to oversee the activities of the food vendors in the selected secondary schools within the local government and findings from this study will provide useful information for policy formulation and strategic information.

MATERIALS AND METHOD

Area Covered (Population)

The target population constituted the food vendors in Secondary Schools in Abeokuta South Local Government. There are twenty (20) secondary schools in Abeokuta South Local

Government of Ogun State. These comprises of both the Junior and Seniors Secondary Schools. Fifteen Schools were randomly picked from the twenty existing schools. Food vendors included in the study were those who prepared food at home and transport it to the school for sale. Vendors operating outside the school premises were excluded because, in most cases, they were not registered with the school authority. In all; thirty nine (39) food vendors were interviewed in their respective schools.

Research Design

Structured questionnaire and observational checklist were the main research instruments used for the study. The questionnaire contained questions that elicited information about the socio-demographic characteristics, food handling and hygienic practices, and government intervention at ensuring safe and hygienically prepared food; while the checklist was designed to seek information about the vendors' personal hygiene and behaviour during food vending exercise in the schools. Forty two (42) parameters were examined.

Methodology

The questionnaires were administered just before sale of food commenced (between 10:30 and 11:30 am), thereafter, the interviewer observed the food vending activity and then completed a checklist on each respondent during the food sale.

All completed questionnaires and checklists were validated manually and data analysis carried out using Statistical Package for Social Sciences (SPSS) program Version 15. Chi-square test was used for statistical analysis and level of significance set at $p < 0.05$.

RESULTS

Demographic Characters

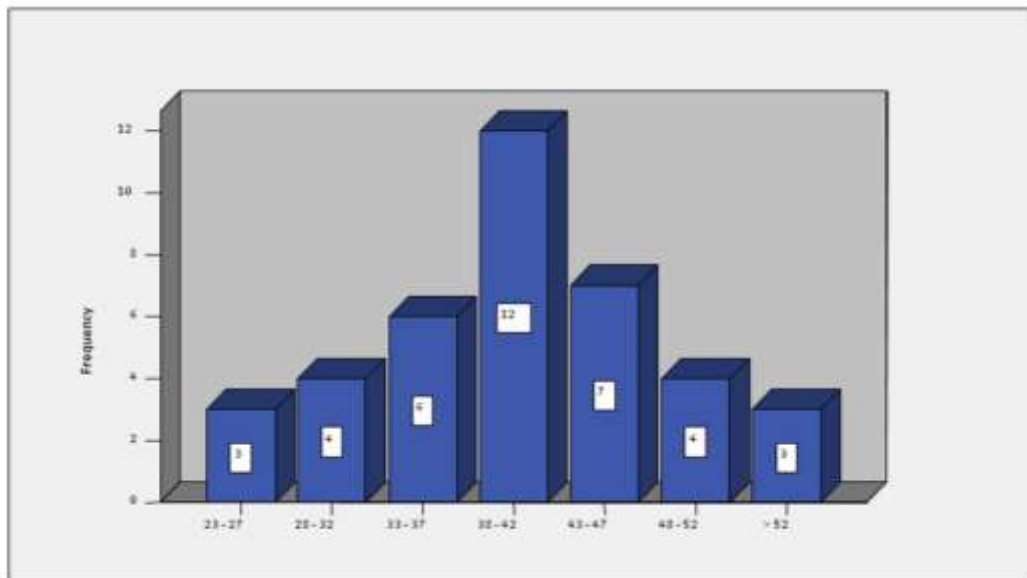


Figure 1: Chart Showing Age Distribution of the Food Vendors

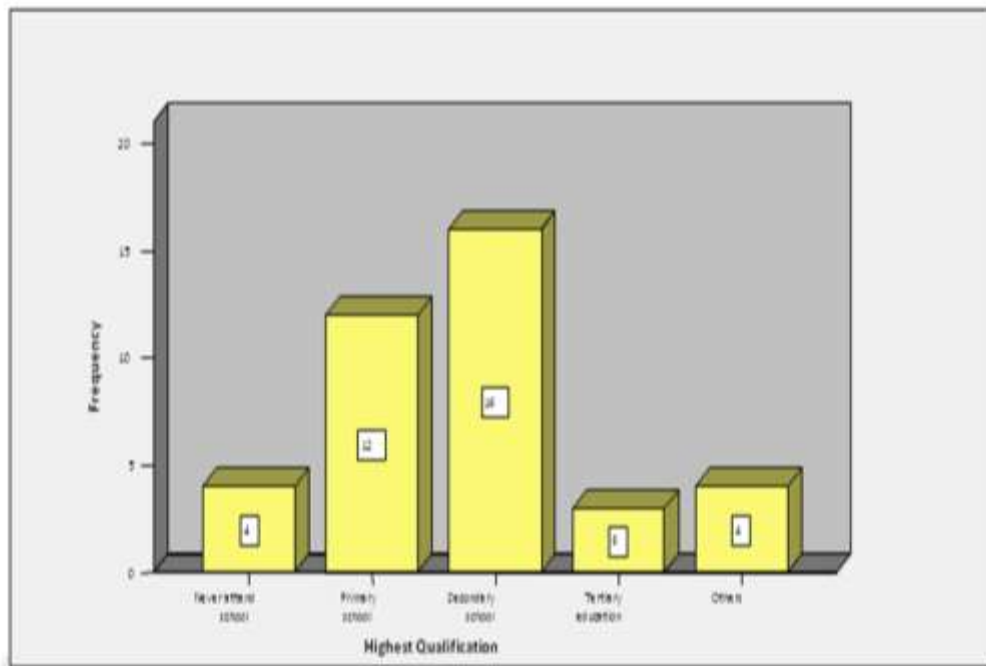


Figure 2: Chart Showing the Educational Background of the Vendors

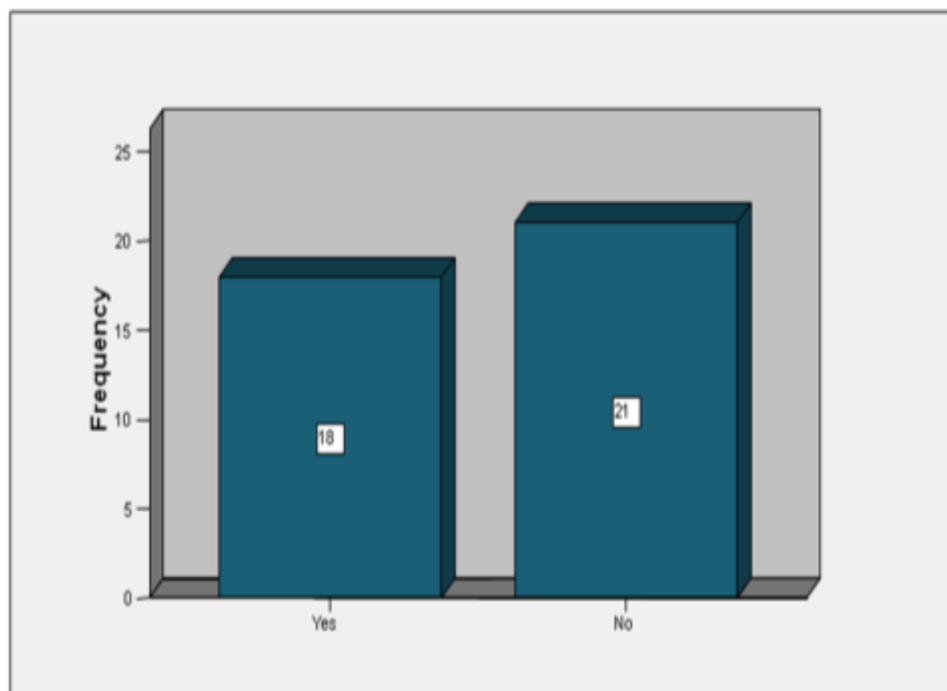


Figure 3: Chart Showing Hygienic Practices of Food Vendors (Wash Hand Basin with Clean Water for Hand Washing)

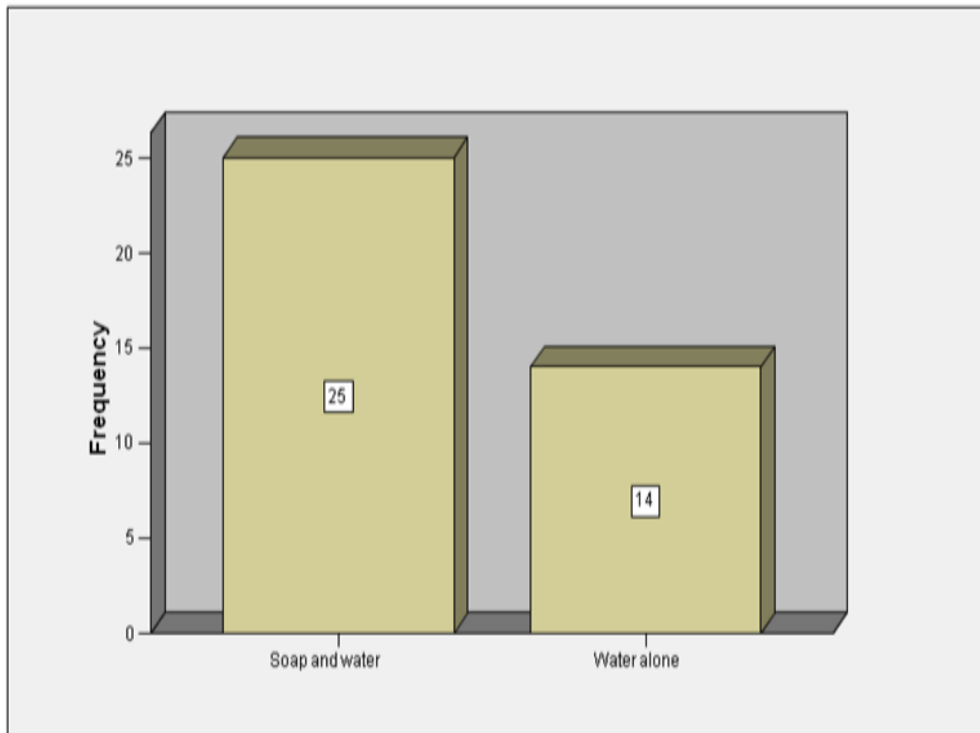


Figure 4: Chart Showing Attitude of Food Vendors to Hygienic Practices

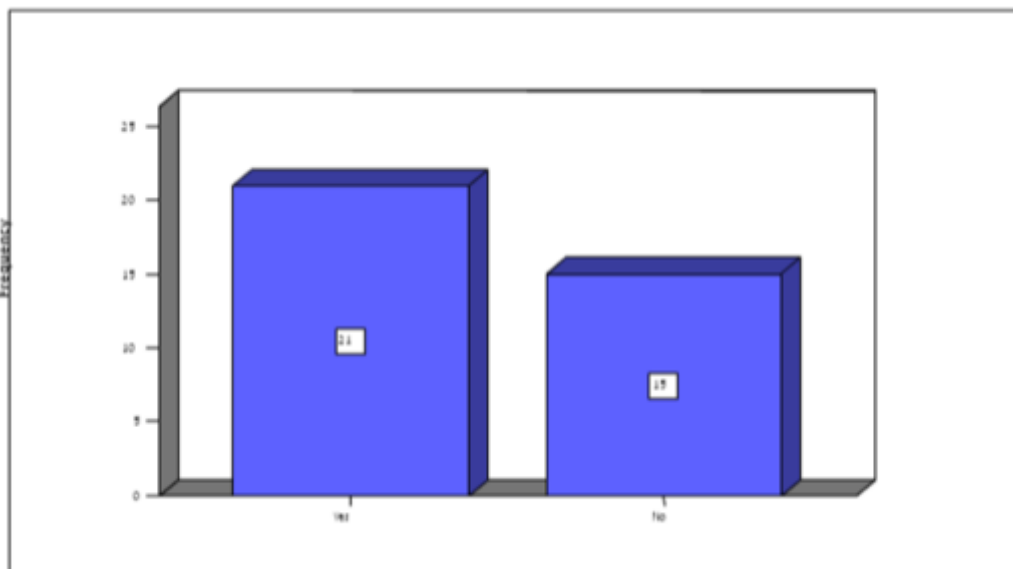


Figure 5: Chart Showing Frequency of Hand Washing

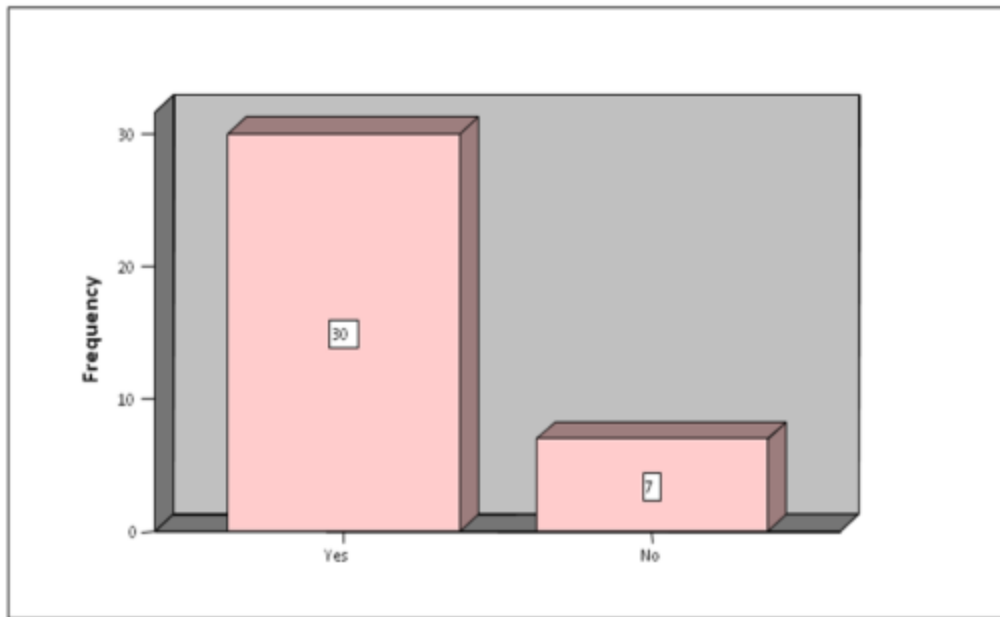


Figure 6: Chart Showing the Frequency of Emptying Waste

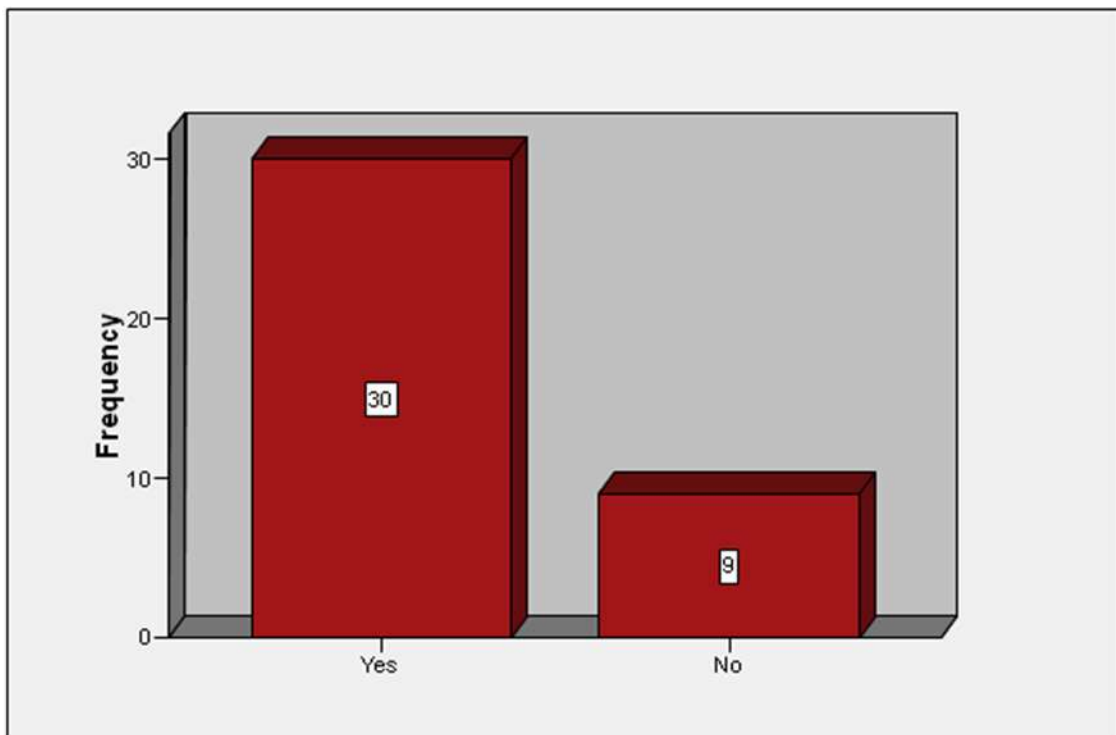


Figure 7: Pest Control

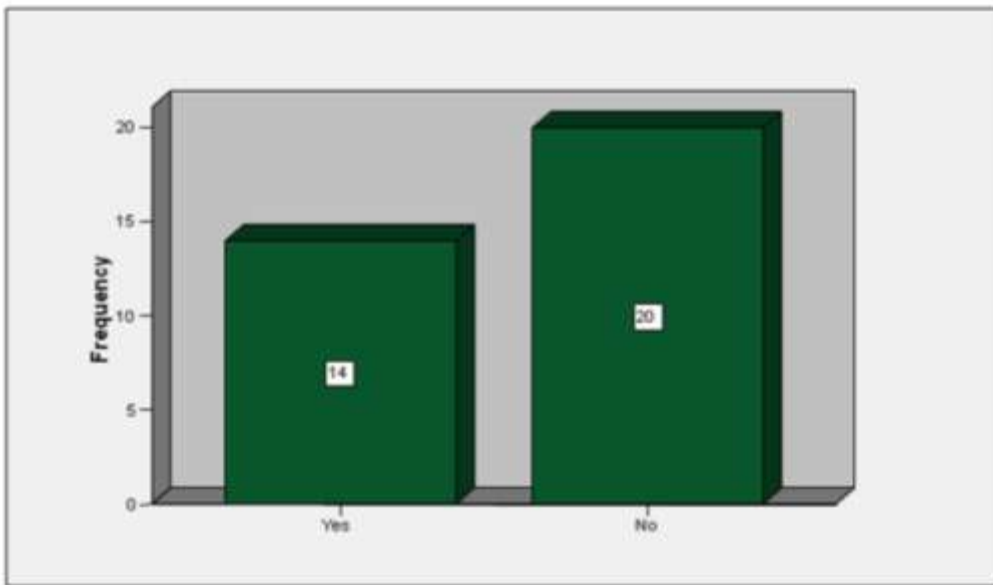


Figure 8: Chart Showing Hygienic Practices of Respondents (Use of Protective Clothing)

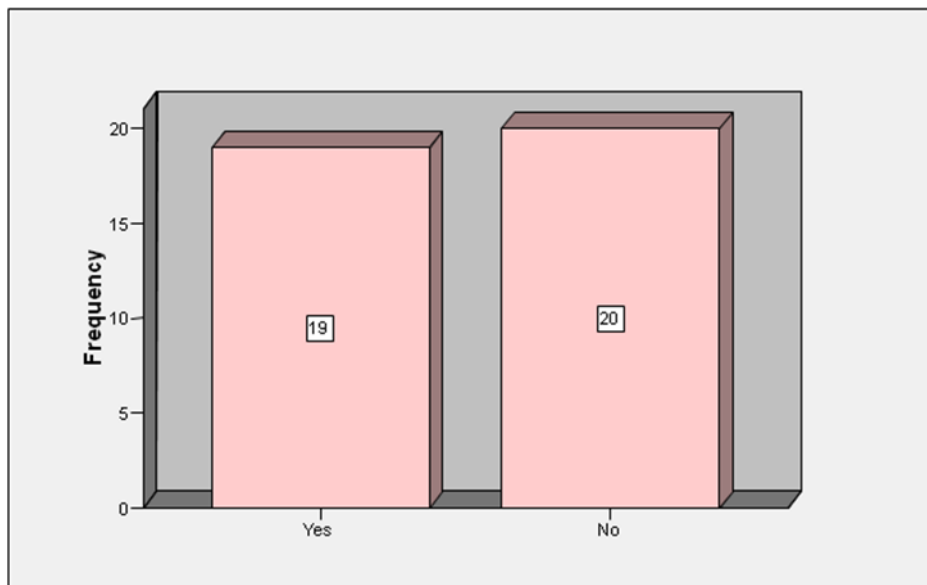


Figure 9: Hygienic Practices (Availability of Toilet Facilities)

Table 1: Vendors with Means of Keeping Food Hot

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Food warmer	37	94.5	94.9	94.4
Cloth	1	2.6	2.6	97.4
Sack	1	2.6	2.6	97.4
Total	39	100.0	100.0	100.0

Table 2: Food Handling Training

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Yes	36	92.3	94.7	94.7
No	2	5.1	5.3	
Indifferent	1	2.6		
Total	39	100.0	100.0	100.0

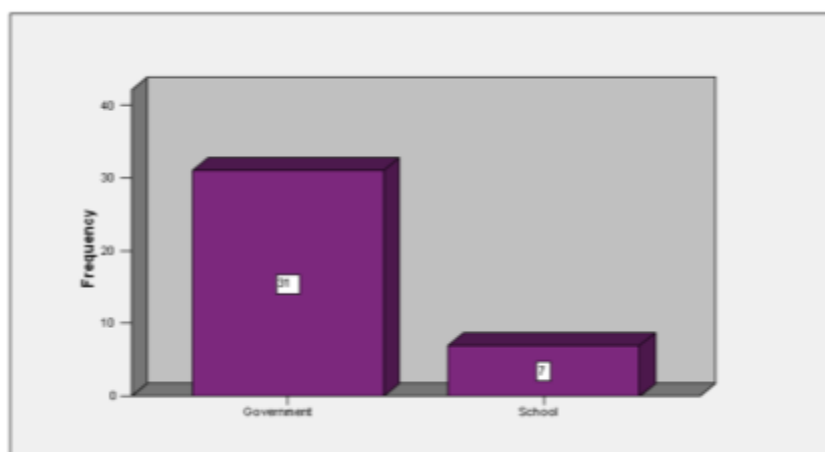


Figure 10: Chart Showing Organizer of Food Training

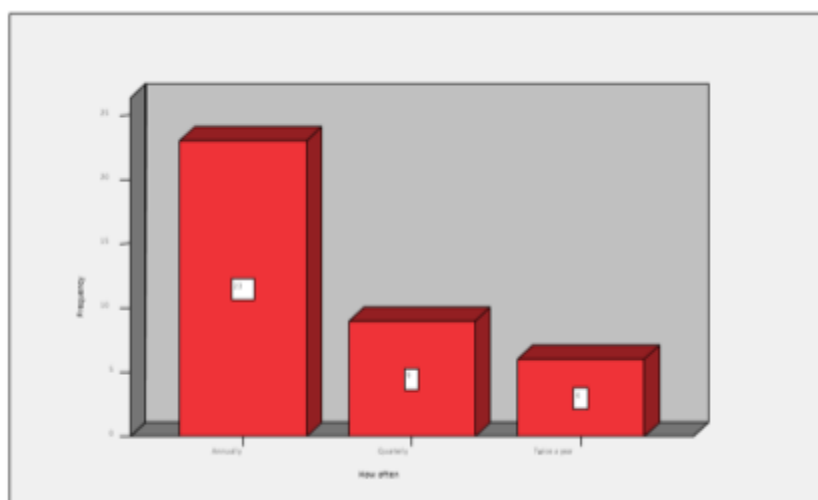


Figure 11: Chart Showing the Frequency of the Food Handling Training

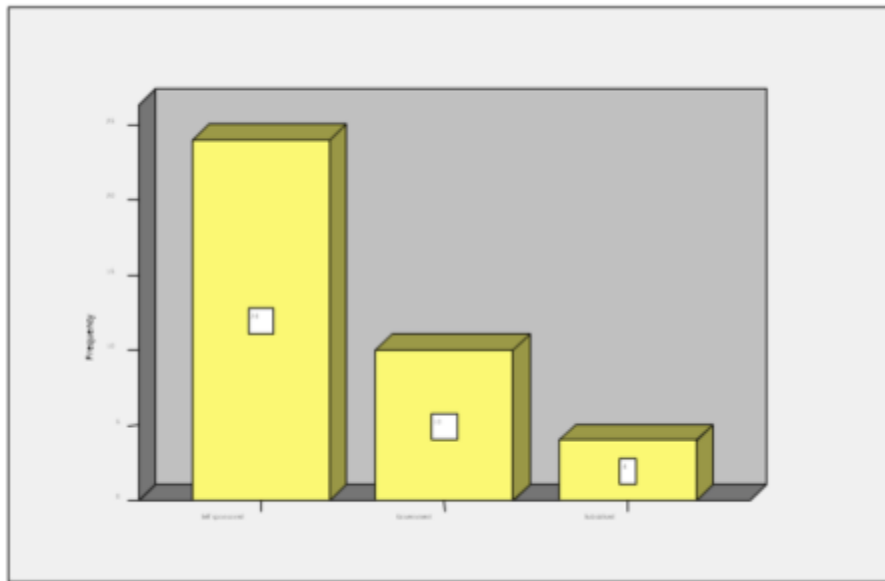


Figure 12: Chart Showing Sponsorship of Food Handling Training

DISCUSSIONS

All the vendors (100%) were female, which is an indication that food vending trade is predominantly a job for women (Abdul-Salam *et al.*, 1993), 30.8% falls within the middle age (38-42), the educational level of the vendors are very low only, 7.7% of the vendors assessed had tertiary education, 41.0% had secondary education, 30.8% had primary education while 10.3% did not have any formal education. The rate of illiteracy was low. This could have effect on the hygienic practices of the vendors, since they would lack appreciation for safe food handling practices.

Consequently, they are perceived to be a potential risk to food safety due to their low educational background and hence, may have little or no understanding of microbial or chemical contamination of food and how to avoid it. The condition for safe handling of foods seems to be low for the food vendors. The level of hygiene was also poor among most of the vendors. Very few were found to be using any type of protective clothing when sneezing or coughing (figure 8).

Many of the vendors observed (51.3%) did not have handkerchiefs either for drying hands after washing or for use when coughing or sneezing. Various reports indicate that practices such as preparing food with uncovered skin abrasions, failure to wash hands after using the toilet or after handling contaminated material, spitting or sneezing and other forms of contamination, may contribute to the occurrence of food-borne disease outbreaks. Moreover, the use of bare hands in the preparation and serving of food is a tradition that seems to be accepted by everyone.

However, an appreciable percentage (94.5%) of the food vendors examined had a good and hygienic way of keeping food hot, while 2.6% kept food in unhygienic way (in sack and cloth) as seen in table 1). Many of the vendors did not have wash hand basin with clean water for washing hands. (Fig. 3) and such practices as handling money and touching different foods complicated the situation regarding possible contamination.

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Most of the vendors (51.3%) did not have access to toilet for use in the school premises. Majority of the vendors indicated that they always wash their hands after visiting a toilet. However only 64.1% reported washed their hands with soap and water, while the rest only used plain water. In some countries the situation is equally undesirable, as it was reported in a study carried out in Spain that 60% of food service personnel neglected to wash their hands adequately (Martinez-Tome et al., 2000).

Almost all the vendors (92.3%, table 2) assessed claimed to have undergone food handling training organised by government. However, 59% of the vendors submitted that the training was done annually, this is not adequate. Also, a significant number of the vendors (61.5%) said the training was self sponsored; this could not encourage participation as the training is usually on holiday when the vendors may not be financially buoyant. Also noted is the fact that the activities of these vendors were not adequately monitored by the concern governmental body (health department of the Local Government) which was very obvious in the operation and the hygienic practices of the vendors examined.

SUMMARY

Since *Asymp. Sig.* value of 0.000 from the chi square test use to assess health status of the food vendors is less than the level of significance ($\alpha = 0.05$), we conclude that the health status of the vendors is not uniformly distributed. In other words, their health status is below expectations.

Since six out of nine (66.7%) of the *Asymp. Sig.* value from the chi square test to assess the relationship between food vendors' hygiene behaviour and practices is less than the level of significance ($\alpha = 0.05$), we conclude that the vendors' hygiene behaviour and practices is not uniformly distributed. In other words, their hygiene behaviour and practices are also below expectations.

In view of the fact that all the *Asymp. Sig.* values from the chi square test to assess the impacts of governmental bodies is less than the level of significance ($\alpha = 0.05$), we conclude that the impacts of governmental bodies is not uniformly distributed. In other words, their impacts are below expectations.

RECOMMENDATIONS

From the foregoing, improvement must come from both the vendors and the government. It is important for food handlers to know how food-borne diseases occur and how they can be prevented. Food handlers, therefore, need to be educated or trained on basic principles of food safety. Their training should include essential information on safe food handling, importance of time and temperature control, sources of contamination, personal hygiene and the need to report illness immediately to the appropriate authority. (Walter *et al.*, 1997).

Health education in the form of training on basic principles of food safety will be useful in promoting food safety among this group and should be done often at least two to three times in a year. Food handlers in institutions such as schools need to be closely supervised concerned governmental agencies as well as the school authority, to ensure that they handle food in most hygienic ways.

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